

Tennessee Pollution Prevention Partnership Success Story



Tennessee Koyo Steering Systems
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Eliminating Idling Cleans The Air

The Member

Tennessee Koyo Steering Systems Co. (TKS) has been in operation at their Monroe County Vonore, TN site since 1989. The facility of 345,000 sq ft and 800 employees is located on property adjoining Lake Tellico. Currently the facility produces over 8,000 rack and pinion steering systems per day for domestic and international original equipment auto manufacturers. Tennessee Koyo is ISO 14000 certified and has a very positive attitude toward environmental management and protecting the environment. Tennessee Koyo is committed to complying with environmental laws, regulations, and other requirements and to continually improving their environmental performance.



The Story

Carbon monoxide testing inside the plant near the shipping/receiving docks in late 2003 yielded 84ppm. TKS is determined to provide their employees with a high quality of life environment and considered this situation to be totally unacceptable and requiring immediate remedial action. An investigation into the cause was launched and the analysis revealed that three factors were contributing to this unhealthy air for TN Koyo: (1) The shipping area was enclosed for climate control reasons thus creating a negative draft to the exterior; (2) the forklifts utilized in the area operate on propane

and produce carbon monoxide; and (3) freight trucks delivering and picking up shipments at the TN Koyo facility were generally left idling during the off loading and loading process because most operate on a milk run type basis each stop is short term (per analysis, the average is just under thirty minutes). Effective January 2, 2004, Tennessee Koyo Steering Systems Co began implementing a “no idling” policy for all trucks making deliveries and pick-ups at their docks. With an average of 25 deliveries and 21 pick ups per day at twenty-five plus minutes per occurrence; Koyo anticipates eliminating 19.5 hours of idling per day. Additionally the old forklifts were replaced with new model lifts which utilize an “Oxycat” CO reducer exhaust system which greatly reduces the amount of carbon monoxide emitted.

The Success

The level of carbon monoxide just inside the plant in the shipping and receiving dock areas in December 2004 has been reduced to 25% (22ppm) of the prior year level creating a healthier environment. This carbon monoxide reduction was possible only with the combination of the “Oxycat” CO reducer exhausts on the Shipping and Receiving forklifts and the “no idling” policy for trucks.

The Pollution Prevented

Based on a two hundred and forty day work year and the elimination of 19.5 hours per day of idling diesel engines, total air emissions will be reduced by almost fifty metric tons per year; that includes almost 1400 pounds of NOx and 70 pounds of VOC. As an annual side benefit to the truck lines, over \$7020.00 will be recognized in fuel savings and \$2434.00 savings in wear and tear on trucks.

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